

# Changing from Traditional Census to Register Based Census International Experience

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# Content:

Example of  
India

Example of  
Norway

Example of  
Turkey

# Population Census in India

- The first census was held in 1872. From 1881 onwards population censuses are held every ten years. The 2011 was the 15th national census in the country.
- The Census Act was enacted in 1948 to provide for the scheme of conducting population census with duties and responsibilities of census officers. The Government of India decided in May 1949 to initiate steps for developing systematic collection of statistics on the size of population, its growth, etc., and established an organisation in the Ministry of Home Affairs. From 1949 onward, the census was taken under Registrar General and Census Commissioner.
- The provisional census result is in one month, Housing Census results within one year, final Population Census results in 18 months, and all major results within 2 years of Census.
- Considering the manpower availability and cost, growing complexity of data processing, complete coverage is increasingly difficult, growing intolerance of language, religious minorities and ethnic groups, difficult and isolated areas, and non-cooperation by respondents, India make a way forward to NPR.

# National Population Register in India

- The National Population Register (NPR) is a comprehensive identity database to be maintained by the Registrar General and Census Commissioner of India.
- The legal base: The Citizenship Act 1955 and the Citizenship (Registration of Citizens and issue of National Identity Cards) Rules, 2003. It is mandatory for every usual resident of India to register in the NPR. A usual resident is defined for the purposes of NPR as a person who has resided in a local area for the past 6 months or more or a person who intends to reside in that area for the next 6 months or more.
- The NPR database contain demographic as well as biometric particulars, such as name, sex, date of birth, current marital status, name of father, mother and spouse, educational attained, nationality, occupation, present and permanent addresses, potograph, and finger biometry of persons above the age of 15 years.
- Every individu is assigned a unique National Identification Number (NIN).

## National Population Register in India (2)

- During the first phase of Census 2011, enumerators have visited every household and have collected the details required for the NPR in a paper format. These forms have been scanned and the data has been entered into an electronic database in two languages - the State language and in English. Biometric attributes - photograph, ten fingerprints and two iris images are being added to the NPR database by organizing enrolment camps in each local area. The enrolment will be done in the presence of Government servants appointed for this purpose. All usual residents who are above 5 years of age should attend the enrolment camp.
- The local authorities will take the necessary steps to make publicity of the duration and location of the enrolment camps in the area.
- The data for National Population Register was collected in 2010 along with the houselisting phase of Census of India 2011. The updation of this data was done during 2015 by conducting door to door survey.

# Advantages and challenges

## Advantages of census:

1. Gives a snapshot of the population at a particular point of time – the reference date.
2. The count apart, gives out data on the age profile, sex composition, religion, social status, mother tongue, language, educational status, occupation, migration, fertility, etc, and housing census provides indicator like type and quality of housing stock, etc.
3. Individual respondent is given an assurance that the information collected is confidential and that no individual information would be revealed to any third party. As anonymity is assured, the information is free of biases.
4. Produce basic population statistics (vital statistics) every year, more up to date and reliable statistics.

## Challenges of NPR:

1. Dynamically updating and keeping it live on a real time basis.
2. Privacy issues would add to the pressure.
3. Register based census coupled with conducting a regular census by a house to house enumeration of the entire population would be the optimal mix for the future.

# Population Census in Norway

- The censuses in Norway in 1960 and 1970 were used to establish registers; the most important being the Central Population Register (CPR). In the CPR, residential addresses, births, deaths and other vital events are recorded.
- Since the 1970 Census, the focus has gradually shifted to the use of administrative registers for statistical purposes. The 1970 Census was also used to establish the Register of the Level of Education in collaboration with the Ministry of Education.
- In the 1990 Census: information on demography, income and education, as well as geographical characteristics, was collected from registers.
- Labour market data and data on households and housing, were collected by questionnaires from a sample of the population. For labour market variables a combination of survey data and register data was used.
- The 2000 Population Census, Statistics Norway has decided to use administrative data sources for all variables, including labour market characteristics.
- The Housing Census was a traditional census using questionnaires for every occupied dwelling.

# Population Census in Norway (2)

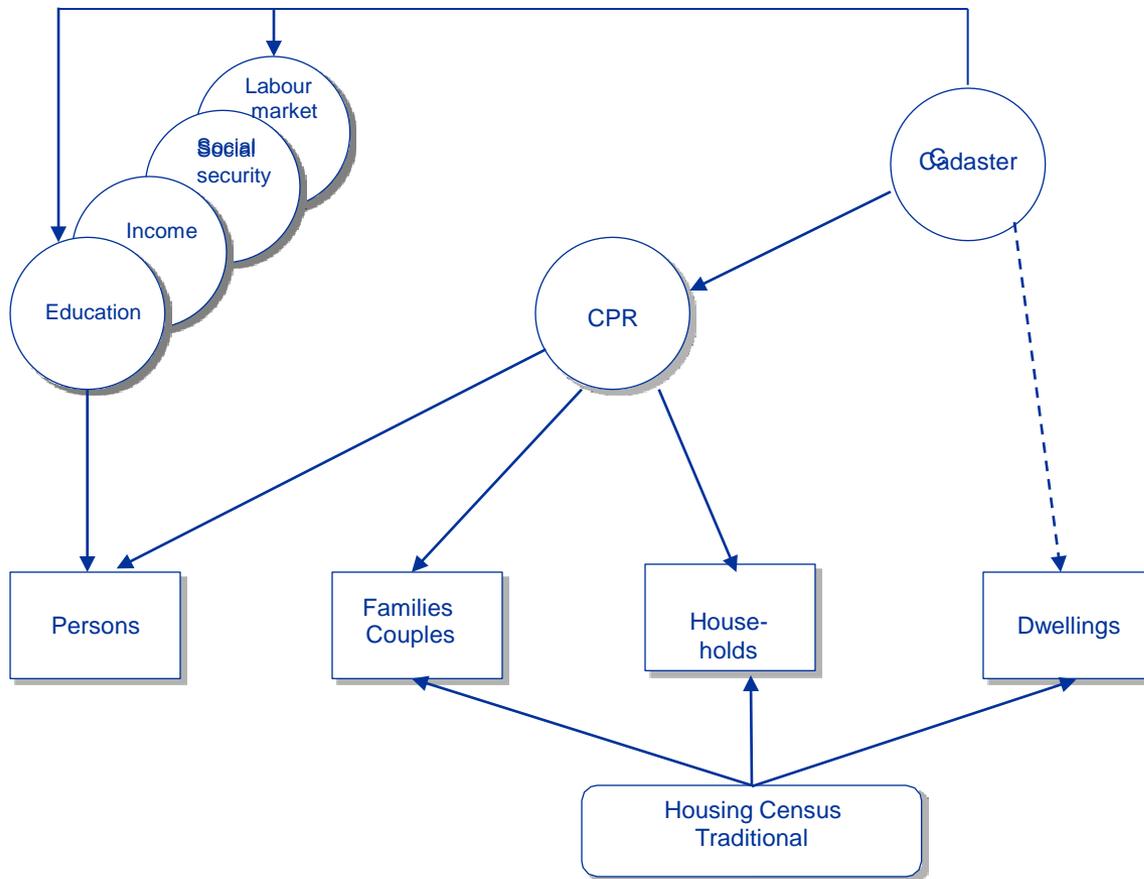
- The Central Population Register (CPR) with a unique national identification number is very important in developing register-based statistics in Norway.
- The personal identification number is now used in all registers of any importance, and the ID-number is used as a linking key when matching registers.
- The CPR is the central register in population censuses, providing data on demographic characteristics and family characteristics, as well as place of residence.

# Norwegian 2001 Census

## Goals

- Produce Census statistics for 2001
- Establish a basis for the 2011 register-based census
  - The Dwelling Address Project

# Census 2001: Combined census



Persons:  
Registers

Families and households:  
Registers and forms

Housing and dwellings:  
Census forms

# Dwelling address project

- Extend the Cadaster to comprise dwellings, not only buildings
  - ✓ Add dwelling number to street address
  - ✓ Establish a link between dwellings and resident (in CPR)
  - ✓ Using data from census forms
- Main problem: Multi-dwelling buildings
- Participants in project
  - Statistics Norway (Census 2001)
  - Register authorities: Owners of CPR and Cadastre
- Use “census data” for administrative purposes
  - Multiple legal base for Census 2001

# Following up on the Dwelling Address Project

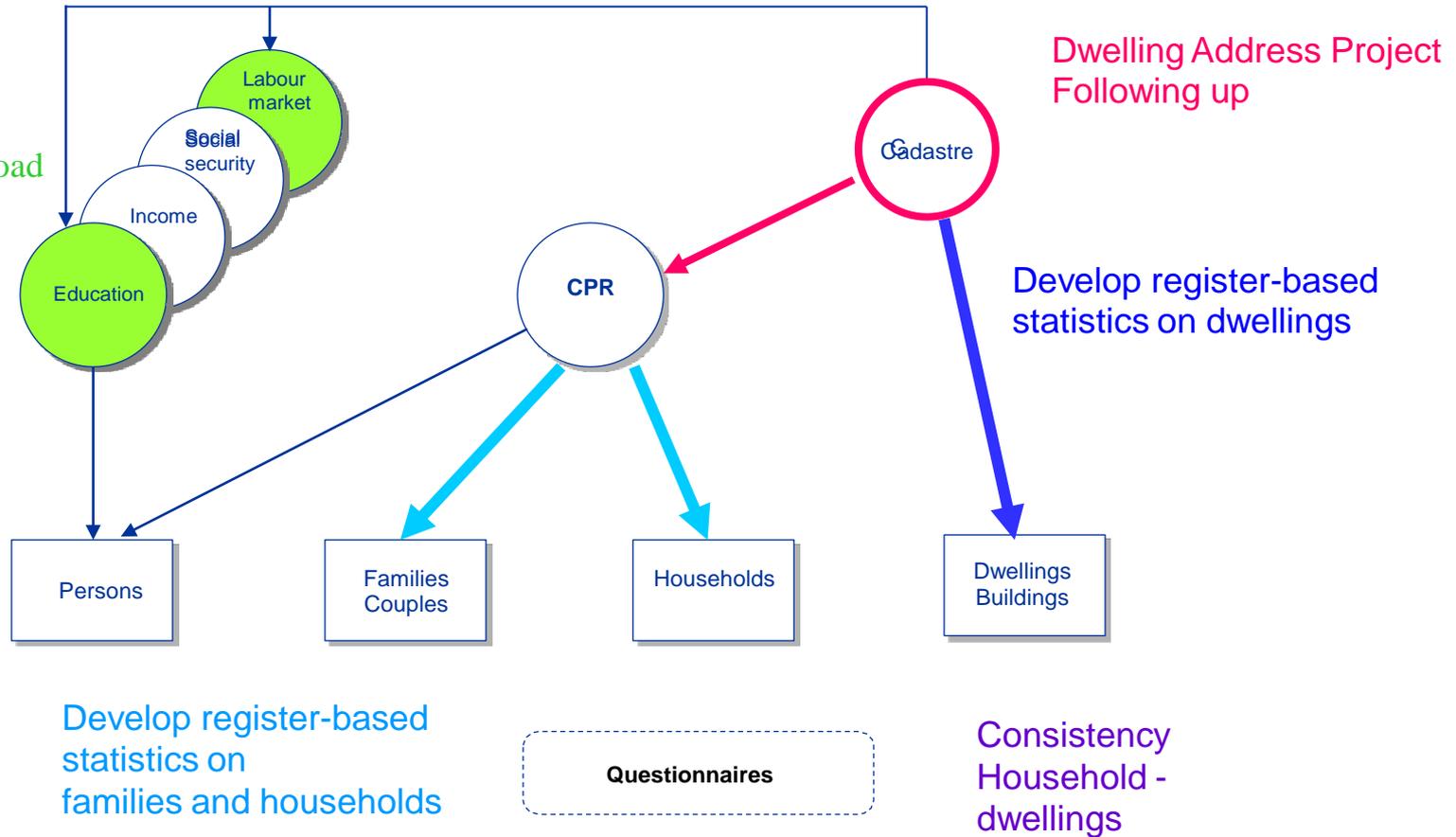
- Statistics Norway playing an active role – pushing forward
  - Quality monitoring
- Register owners improved quality in administrative registers
- Situation by end of 2010: 95 % of population linked to a dwelling
  - The same today

# Data improvements for 2011 census

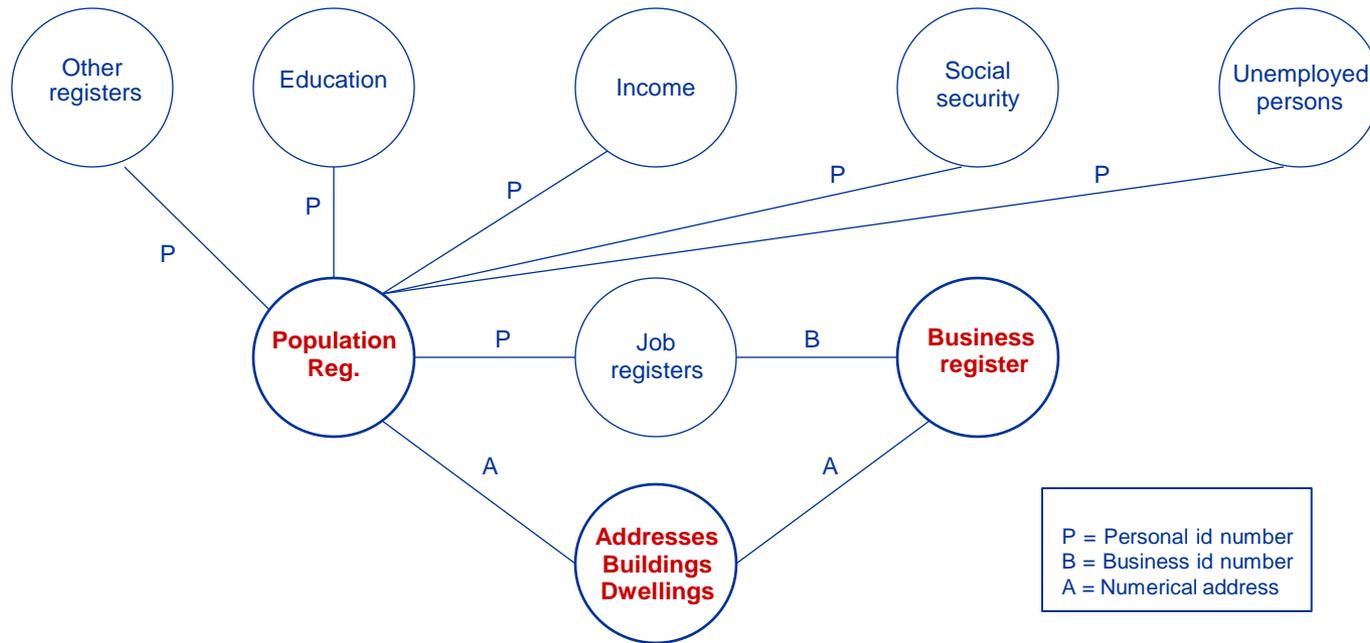
## Persons

Improvement for some variables, i.e.

- Occupation
- Education taken abroad
- +++



# Register-based population and housing census system



- Units covered in **base registers**: Persons, dwellings/buildings and enterprises/establishment
- Derived units: Families and households
- Persons linked to
  - Dwellings
  - Workplaces (establishments) through job registers

# Registers/register systems used in Census 2011 in Norway

- Population register
  - Place of living, demography, migration, families, households
- Register of addresses, buildings and dwellings
  - Housing, geographical characteristics
- Business register
  - Self-employment, place of work, industry
- Job registers
  - Current activity status (employment), occupation, status in employment
- Register of unemployment
  - Current activity status (unemployment)

# Registers/register systems used in 2011 Census in Norway (cont)

- Register of education
  - Educational attainment, current activity status (students)
- Pensions registers
  - Current activity status (pensions)
- Income registers
  - Income, current activity status (self-employed, capital income)
- Register of vehicles
  - Private cars in household

# History of population census in Turkey

- Turkey have been conducted 14 Population Census, the last census is in 2000. First population census was carried out in 1927.
- All population census were carried out with the traditional method in one day by application of a curfew according to the de-facto population definition which means that persons were enumerated at localities where they were present on the census day.
- Main problem of the census is the census is overcounting of population (imaginary population) and the census information with ten years interval is out of date as well as the census is very costly.
- Therefore Turkish Statistical Institute (Turskstat) aimed to change the method of population census to produce more reliable and updated information on population size and distribution.

# ADDRESS BASED POPULATION REGISTER SYSTEM 2007 POPULATION CENSUS IN TURKEY

- Change method of census from traditional to register based census in order to produce more frequent data and decrease the cost of the census.
- This register is a basis for population and housing census.
- Register and other administrative sources are an alternative to the traditional census as far as they contain the relevant topics, use similar definitions and classifications and cover the entire population.

# New system of the Census

- General Directorate of Population and Citizenship Affairs (GDPCA) of the Ministry of Interior are responsible for keeping and updating population registers in the form of family ledgers on the MERNIS (Central Population Registration System) database.
- GDPCA is responsible for registration of births, deaths, marriages, divorces, citizenships and adoption as well as other vital events. Population registers are kept in the form of family ledgers. The information in the family ledgers are vital events and relationship between members of generations.
- Each family identified by father's name so the information on changes in usual residence were not kept in these family ledgers. It is impossible to derive information on the distribution of population by locality, therefore existing population registers has to be improved from the standpoint of population statistics.

# New system of the Census (2)

- The first step to establish the new system is to prepare a legislation for defining responsibility of organizations on establishing, maintaining the system and basic definitions.
- The Population Services Law No.5490 dated April 25, 2006, is the legal base for the Address based population registration system (ABPRS). The Turkish Statistical Institute was charged to establish the databases, and GDPCA, Ministry of Interior was charged for updating and maintenance of the system.
- The purpose of establishing the ABPRS are to establish National Address Database (NAD) that covers all addresses within the boundaries of the country, to obtain the address information of Turkish citizens and foreigners living in Turkey, to match the address information and the registers of the MERNIS database by using the Turkish Republic identification numbers for Turkish citizens, to match the address information and passport numbers of foreigners and to keep this information on a separate database.
- The law charged Turkstat for establishing the ABPRS and Ministry of Interior, GDPCA for developing and maintaining the system. All studies related to establishing the system were coordinated by Turkstat and carried out by the executive committees of provinces and districts, headed by the governor or the district governor. Studies for establishing the system were started in May, 2006 and the following studies were carried out.

# Five stages in Population Services Law

1. Establishment of the National Address Database
2. Field application for collecting information on usual residence addresses
3. Data processing → matching the information with MERNIS and addresses with the NAD
4. Checking the usual residence addresses from the address lists
5. Updating the system

All works related to the establishment of the system were coordinated by the Turkstat and carried out by the executive committees which were headed by governors and members were the head of municipality, the head of district/province registration office, a head of special administration of province, a head of local administration and supervisors of the district/province.

# Result of the new system

- According to the official statistical programme, population size and basic characteristics of population by administrative units will be announced every year.
- First population census results referring December 31, 2007 based on the new system were announced to the public on January 21, 2008 by the press conference.
- Results were announced on the following detail:
  1. Population by localities (province, district, sub-district and village)
  2. City and village population
  3. Age and sex structure
  4. Nationality of persons living in Turkey (Turkish citizens and foreigners)
- All information is available on the web site of Turkstat and the database for the ABPR is available on the web site to allow the users preparing their own tables.
- National Education Database (NED) was established based on information related to the completed level of education available in the ABPRS. NED has been updated by collecting records related to students and graduates from Ministry of Education and all universities. Registers on education will be updated every year and the database of the statistics on the level of education will be available in 2009.

## Result of the new system (2)

- The law stated that all personal information by address of usual residence on the bases of household were demonstrated at the offices of the heads of the quarters/head of the villages for 60 days.
- When people change the place of residence, they have to apply to districts registration offices for updating information in the system. For institutional places, authorities of the places have to declare the registration offices about persons who left or come to the insitutional places. Changes in border of the administrative units are updated by the GDPCA. District registration offices are able to reach only addresses within the boundaries of districts.

# Advantages and disadvantages

## Advantages:

1. Reduced cost.
2. Produce basic population statistics (vital statistics) every year, more up to date and reliable statistics.
3. The system can be connected to other official records which have Turkish Identification Number.

## Disadvantages:

1. Register based have to rely exclusively on the information contents that can be formed on the basis of the registers available.
2. Impose some restrictions in the variables available for analysis.
3. Deficiencies both internal and international comparability.
4. In the change of address the person who is moving may neglect to provide notification on time or be late in doing so.

- It is **IMPORTANT** that the general public **APPRECIATES AND UNDERSTANDS** the benefits of using register sources for statistical purposes and
- Broad public **acceptance of the use** of the administrative data for purposes of statistics production.

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**Thank you**